

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



550159

(43) International Publication Date  
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number  
WO 2004/082723 A2

(51) International Patent Classification<sup>7</sup>: A61L AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/IL2004/000156

(22) International Filing Date: 19 February 2004 (19.02.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
155038 23 March 2003 (23.03.2003) IL  
158106 25 September 2003 (25.09.2003) IL

(71) Applicant and  
(72) Inventor: SHIFRIN, Edward, G. [IL/IL]; 64 Ha-Shahar St., 43565 Raanana (IL).

(72) Inventors: NICKELSHPUR, Gennady, S.; 9-D Ha-Bastiliya St., Apt. 9, 35597 Haifa (IL). SHVARTS-MAN, Mordehy, D.; 3, Harav Mashash St., Apt. 1., 32167 Haifa (IL). UMANSKY, Mark., A.; 20, Mordehy Anilevich St., Apt.8., 35025 Haifa (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SUPPLEMENTARY VASCULAR CLAMP FOR THE TOOL KIT OF AN OPEN APPROACH STAPLER

(57) Abstract: The present invention relates to medicine, in particular, to clamps used in vascular surgery for occlusion of blood vessels during a surgical operation, such as vascular clamps used in aortic aneurysm repair. The claimed supplementary vascular clamp comprises a pair of pivoting arms, each of them having a proximal end and a distal handle end. Each pivoting arm contains clamping jaws rigidly attached to a respective proximal end of this arm and shaped as a concave semi-cylindrical or semi-oval cavity. The clamping jaws are movable between the open position and closed position and define a through cylindrical or oval cavity in their closed position. The clamping jaws of the vascular clamp are also provided with a tightening means to provide intra-aortal bending of the ends of staples of an open approach stapler. The tightening means is shaped as plates or a strip of resilient material. The strip may be provided with a tensioning device. The vascular clamp may be also provided with a compensating means for correcting non-uniformity in the thickness of aorta walls. The vascular clamp may be further provided with a compensating means for correction of irregularity in wall thickness of the aorta, a first and a second sealing means for providing secure enclosure of aorta walls, as well as a means for providing regular ejection of staples.

WO 2004/082723 A2